

ABSTRACT OF THE DISCLOSURE

A method and apparatus are disclosed for prefetching Internet resources based on the estimated round trip time of the resources. Whenever a user clicks on an embedded hyperlink, the prefetching strategy aims to ensure that the corresponding document has been prefetched or can be fetched very quickly from its origin server. Web access time as perceived by the user is reduced, while also minimizing the network, server and local resource overhead due to prefetching. The estimated round trip time is obtained or approximated for all referenced documents. The "round trip" time or access time of a resource is the time interval between the sending of the first byte of an HTTP request for the resource until the last byte of the server response has arrived at the requesting Web client. Documents with the longest access times are prefetched first and prefetching generally continues until the estimated round trip time falls below a predefined threshold. An HTTP HEAD request may be used to determine the estimated round trip time of a Web resource. The prefetching agent can be configured to prevent prefetching of those documents that are quickly fetchable, dynamically generated or non-HTTP based resources, or those documents whose size exceed a certain limit, to minimize the network, server and local resource overhead due to prefetching. The thresholds applied to the list of documents to be prefetched can be dynamically adjusted by the agent, based on changing network and server conditions.

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